



Writer's Direct Contact Information:  
408-848-7165 (ph)  
408-842-5612 (fax)  
[lorenbald@indianmotorcycle.com](mailto:lorenbald@indianmotorcycle.com)

**via FEDEX AND FACSIMILE**

February 7, 2003

Mr. Jonathan D. White, Chief  
Defect and Recall Information Analysis Division  
Office of Defects Investigation  
Safety Assurance  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

03V-039 ① or ②

**RE: Part 573 Defect and Noncompliance Report**

Dear Mr. White:

In accordance with 49 CFR Part 573, enclosed is the original Part 573 Defect and Noncompliance Report, dated February 4, 2003.

If you have any questions or require further information, please contact Gabrielle Gallegos at (408) 848-7257.

Very truly yours,

Loren Baldi Garibaldi  
Paralegal

RECEIVED  
FEB 10 A 6:55  
DEFECTS INVESTIGATION  
INDIAN MOTORCYCLE CO., INC.

**PART 573 Defect and Noncompliance Report**

On April 26, 2001, Indian Motorcycle Corporation, a California corporation ("IMC"), submitted a Part 573 Report regarding voltage regulator diode failure. IMC had very little information at that time, and the report was largely incomplete. IMC subsequently undertook an investigation of the failures and was unable to determine the root cause or even the predominant failure mode. IMC, in consultation with the manufacturer of the regulators, concluded that the incidents were isolated and did not represent a safety hazard. On September 12, 2001, IMC's attorney sent a letter to NHTSA withdrawing the report. IMC management was advised that the matter was concluded. However, IMC later learned that this advice was incorrect, and that the matter would remain open until either IMC concluded the recall or successfully pursued a Petition for a Determination of Inconsequentiality. In order to make a determination as to the appropriate course of action, IMC undertook another investigation of the regulator at issue. The results are described in the report. Although IMC was again unable to conclusively determine the root cause of the reported failures, IMC has decided to proceed with a recall of the regulator and is hereby updating the Defect and Noncompliance Report originally furnished to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

**Date this report was prepared:** February 4, 2003

**Furnish the manufacturer's identification code for this recall (if applicable):** NA

**Identify the full corporate name of the fabricating manufacturer of the vehicle being recalled.**

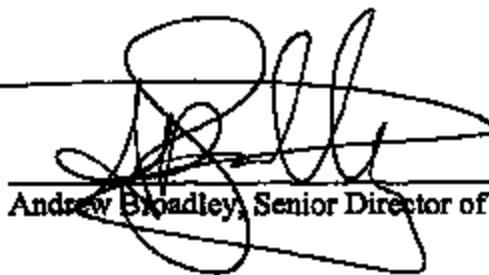
Indian Motorcycle Corporation  
200 E. Tenth Street  
Gilroy, California 95020

**Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.** Andrew Broadley, Senior Director of Engineering

**Telephone Number:** 408-846-7257      **Fax No.:** 408-842-5612

**Name and Title of Person who prepared this report.** Gabrielle Gallegos, General Counsel  
408-846-7257, Kyle Langlands, Engineering 408-846-7123

**Signed:** \_\_\_\_\_

  
Andrew Broadley, Senior Director of Engineering

**I. Identify the Vehicle Models Involved in the Recall**

03V-039 ③ of ②

**1.1 Identify the Vehicles Involved in the Recall, for each make and model or applicable vehicle line (provide illustrations or photographs as necessary to describe the vehicle), provide:**

**A. Make(s): IMC Model Years Involved: 1999-2001 Model(s): Chief, Indian Spirit, Scout, Scout Centennial, Chief Centennial**

**Production Dates: Beginning: March 1, 1999 Ending: May 20, 2001**

**VIN Range: See Attached VIN List**

**Vehicle Type: Motorcycle Bodystyle: N/A**

**Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall:**

The recalled vehicles have a Compufire brand series type voltage regulator. The vehicles not included in the recall have a shunt type regulator.

**1.2 Identify the approximate percentage of the production of all the recalled models manufactured by your company between the inclusive dates of manufacture provided above that the recalled model population represents.**

100%

**II. Identify the Recall Population**

**2.1 Furnish the total number of vehicles recalled potentially containing the defect or noncompliance.**

7,947

**2.2 Model Year Potentially Involved**

1999, 2000 and 2001

**2.3 Total Number Potentially Affected by the Recall:**

7,947

**2.4 Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance: 99% Some have already been replaced due to failures other than the safety defect.**

**2.5 Identify and describe how the recall population was determined—in particular how the recalled models were selected and the basis for the beginning and final dates of manufacture of the recalled vehicles:**

All vehicles that contain the Compufire series style regulator were included in the recall.

**III. Describe the Defect or Noncompliance**

**3.1 Describe the defect or noncompliance. The description should address the nature and physical location of the defect or noncompliance. Illustrations should be provided as appropriate.**

The recalled regulator is a series type. If the silicon controlled rectifier ("SCR") in a series regulator is damaged or defective it can fail by staying in an "open" mode, causing uncontrolled flow of battery voltage to ground through the regulator. This can cause the regulator to overheat, burn out, or even catch on fire.

**3.2 Describe the cause(s) of the defect or noncompliance condition.**

IMC believes that there are two potential circumstances that could cause the SCR failure described above. One is that the component is defective. IMC has no evidence that any of the Compufire regulators are defective, and Compufire maintains that none of the regulators supplied to IMC are defective. The second is damage to the SCR due to reverse transient voltage spikes generated by other chassis electronics. Switches and other components that make or break electrical connections generate such spikes routinely. If the spikes exceed the rated capacity of the SCR, the SCR can be damaged, leading to failure. IMC has performed limited analysis of transient voltage behavior of the electrical system in which the Compufire regulator functions in the recall population. IMC was not able to detect transient voltage levels in excess of the Compufire regulator's rated capacity, or otherwise of sufficient levels to damage the regulator's SCR. IMC was unable to analyze any of the regulators or electrical systems actually involved in the reported fires, and hence IMC has been unable to determine the exact cause of the field failures.

However, as described below, the replacement of the Compufire regulators with shunt type regulators will eliminate the possibility that electrical spiking of any magnitude could cause the regulator to burst into flames.

**3.3 Describe the consequence(s) of the defect or noncompliance condition.**

If the regulator overheats to such an extent that a fire erupts, the rider could be injured or the garage or other facility in which the motorcycle is stored could suffer damage.

**3.4 Identify any warning which can (a) precede or (b) occur.**

The rider could notice loss of electrical system power prior to overheating of the regulator sufficient to cause flames, but such power loss may not occur in every instance.

**3.5 If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address.**

Engine Electronics, Inc.  
196 University Parkway  
Pomona, CA 91768

**3.6 Identify the name and title of the chief executive officer or knowledgeable representative of the supplier.**

Lewis Hemphill, President  
909-598-5485

**IV. Provide the Chronology in Determining the Defect/Noncompliance**

**4.1 With respect to a defect, furnish a chronological summary (including dates) of all the principle events that were the basis for the determination of the defect. The summary should include, but not be limited to, the number of reports, accidents, injuries, fatalities, and warranty claims.**

IMC conducted a transient voltage analysis on a limited number of the Compufire regulators using the services of Phelon, IMC's current supplier of voltage regulators. As discussed above, the tests were limited and inconclusive, but demonstrated that a potential failure mode exists. IMC hence determined to proceed with the recall. IMC has had no reports of accidents, injuries or fatalities as a result of regulator failure. However, IMC received six reports as part of the warranty claims procedure that the Compufire regulator has caught fire, five of which were the incidents reported in IMC's first Defect Report.

**V. Identify the Remedy**

**5.1 Furnish a description of the manufacturer's remedy for the defect or noncompliance. Clearly describe the differences between the recall condition and the remedy.**

IMC will replace the Compufire regulators with shunt type regulators made by a different manufacturer.

**5.2 Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.**

As described above, the recalled regulator is a series type, in which the SCR can fail in an "open" mode, causing uncontrolled flow of battery voltage to ground through the regulator. The regulator employed in the remedy is a shunt type regulator. SCR failure in a shunt type regulator causes a short across the regulator, which takes the regulator out of the circuit with the result that battery current cannot flow back through the regulator. Hence the shunt type regulator can not experience an open flow of battery voltage that would burn out the regulator.

5.3 Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

On May 10, 2001 IMC stopped using the Compufire regulators due to ongoing concerns over quality and problems in communications with the vendor. IMC used a shunt type regulator to replace the Compufire regulator. To the best of the knowledge of the persons preparing this report, IMC has received no reports of regulator fires resulting from SCR failure in the new regulators. IMC has used a shunt type regulator on all production units since ceasing use of the Compufire regulators. In order to be certain that all the Compufire regulators are captured as part of the recall, IMC has included motorcycles manufactured through May 20, 2001.

#### VI. Identify the Recall Schedule

6.1 Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

##### Notification Schedule

IMC will distribute the applicable Service Bulletin and dealer notification during the week of February 10. IMC will distribute the consumer notification letter the week of February 10 as well, as soon as the letter is approved by NHTSA.

##### Remedy Schedule

IMC currently has the replacement regulator in stock and will be ready to ship the recall kits as soon as dealers begin ordering them.

#### VII. Furnish Recall Communications

7.1 Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications (including both original and follow-up) concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. A DRAFT copy of the notification documents should be submitted to this office by Fax (202-366-7882) for review prior to mailing.

The following documents are attached:

- 1) Service Bulletin
- 2) Draft of notification letter to consumers.



03V-036 7 of 22

February \_\_\_\_, 2002

Dear Indian Motorcycle Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

#### REASON FOR NOTICE

Indian Motorcycle Corporation ("IMC") has determined that a defect relating to motor vehicle safety exists in certain Chief®, Indian Spirit™, Scout™, Scout Centennial, Chief Centennial models produced through May 20, 2001. The recalled vehicles have a series type voltage regulator that, if damaged, can become stuck in an open mode that allows battery voltage to flow back through the regulator, potentially causing the regulator to catch on fire.

#### WHAT YOUR IMC DEALER WILL DO

Your IMC dealer will inspect your motorcycle and, if necessary, replace the series type regulator with a shunt type regulator that prevents any possibility of fire damage due to open voltage flow. This replacement will be performed without charge to you.

#### WHAT YOU SHOULD DO

Please contact your IMC dealer as soon as possible to arrange a service date so the dealer may inspect your bike. The actual labor time necessary to perform the inspection and replace the regulator is around half an hour, but your dealer may need additional time with your motorcycle depending on how appointments are scheduled and processed. When you make your appointment with the dealer, please let the dealer know that you are coming in for the recall work so that the dealer can order the necessary replacement parts in advance.

Your IMC dealer is fully prepared to assist you. Please take your motorcycle to your nearest IMC dealer or authorized service center. If you need assistance locating a service facility, please contact a Customer Service Specialist at IMC Customer Service 1-888-899-2997. Also, if you take your bike in on an agreed service date and the repair is not performed within a reasonable time, please call IMC Customer Service. If you have sold or traded your bike, please let us know by completing the postage paid reply card and returning it to us.

If after contacting your dealer and IMC customer service you still have not received the necessary service without charge within a reasonable amount of time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street S. W., Washington, D.C. 20590 or call 1-888-327-4236.

We here at IMC apologize for any inconvenience this has caused you. We care about your safety and the quality of our products – so please get your bike serviced promptly.

Thank you for your attention to this important matter.

George Nobile, Vice President of Customer Service

200 EAST TENTH ST. • GILROY, CALIFORNIA • U. S. A. 95020  
TEL: (408) 846-7228 • FAX: (408) 847-3902



03V-039 8 of 22

Bulletin #: IMCSB-045

Rev: A

Number of pages: 3

Author: K. Langlands

Date: 2/5/03

Affected Models: MY1999-2001  
(all models built prior to May 20, 2001)Affected VINs: All 1999 & 2000 VIN's &  
2001 VIN's attached

# Recall: Service Bulletin

## Voltage Regulator Replacement

**Purpose:**

Instructions for removal and replacement of Voltage Regulator on 1999-2001 Model Year Indian Motorcycles. Please refer to the attached VIN list to identify vehicles requiring this service, as not all 2001 motorcycles are affected.

**IMPORTANT NOTE:** Federal law requires the dealer to complete the recall service prior to retail delivery of vehicles still in dealer inventory.

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle subject to a recall campaign of this type must be adequately repaired within a reasonable time after the owner has tendered it for repair. Failure to repair within sixty (60) days after tender of a vehicle is considered evidence of failure to repair within a reasonable time.

If the condition is not adequately repaired within a reasonable time, the owner may be entitled to an identical or reasonably equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

As you will see in reading the attached copy of the letter that is being sent to owners, the owners are being instructed to contact Indian Motorcycle Corporation customer service if their dealer does not remedy the condition within a reasonable time of the mutually agreed upon service date. If the condition is not remedied within a reasonable time, consumers are also instructed on how to contact the National Highway Traffic Safety Administration.

**Identification of recall regulator:**

The recall pertains to all Compufire brand regulators. The attached VIN list identifies bikes that were originally equipped with recall regulators. They are also identifiable through labels placed on the rear of the regulator and the photos below.



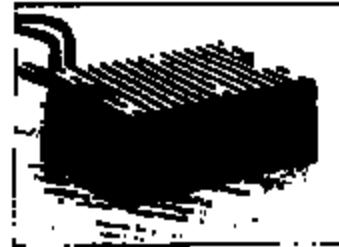
Recall regulator.  
Note: Top of fins are not polished.



Recall regulator.



Back side of recall regulator  
with Compufire label.



Replacement regulator.  
Note: Top of fins are polished.

**Materials Required**

Service kit: 94-750

Part #	Description	Qty
94-034	Voltage Regulator	1
96-777	8" Zip-ties	9
94-481	1/4" 12-10 AWG ring terminal	1
97-084	3/8" Shrink Tubing, 8 $\frac{1}{2}$ " long	1
IMCSB-045	Service Bulletin	1

**Tools**

Torque Wrench (ft-lbs)	Heat Gun	7/16" Socket	Voltmeter
10mm Wrench	5/16" Allen Wrench	5/32" Allen Wrench	Side Cutters

Time Required: .6 hr

**Procedure:**

Note: If you do not feel that you fully understand the instructions as outlined below, please do not hesitate to call your Field Warranty Representative.

**Removal of Existing Regulator:**

1. Properly support and secure vehicle at a comfortable working level.

**WARNING!**

Always disconnect the negative battery cable first. If the positive cable can touch ground with the negative cable attached, sparking will occur and may cause a battery explosion, which could result in serious personal injury.

2. Remove the seat & disconnect battery cables from battery terminals. (Always disconnect negative terminal first)
3. Cut away shrink tube from the two wires that were connected to the positive terminal.
4. After shrink tube is removed and wires are separated, begin removal of zip ties attaching regulator wire to frame. The wire runs down the seat post and along the lower left frame rail.
5. Remove 2 fasteners holding regulator to the frame. Unplug stator wire from stator plug at left of engine case and remove regulator.
6. Remove two external star washers from frame studs.

**Installation of Regulator:**

1. Thoroughly clean the contact points at the base of the studs holding the regulator to the frame.
2. Re-install two external star washers on frame studs.
3. Slip the regulator onto the studs. The wires on the regulator should point downward.
4. Install two 1/4"-20 k-nuts on the frame studs. Torque to 8-10 ft-lbs.
5. Route the wire to the inside of left lower frame tube. Zip-tie the wire to the frame above the front engine mount, behind left foot control gusset plate, in front of lower cross-member (rear engine mount), and up center tube.
6. Crimp the 1/4" 12-10 AWG ring terminal on the regulator wire. Install shrink tube and use the heat gun to shrink the tube on the terminal.
7. Plug regulator into stator plug.
8. Reconnect battery. **NOTE:** Always connect positive cable first.
9. Start vehicle and verify proper charging.
10. Replace seat.

**Completion Reporting and Dealer Credits**

Dealers will be reimbursed for .6 hours of labor time at the dealer's labor rate.

**Labor reimbursement will be paid only after proper "Dealer Response Card" is submitted.**

**Parts will be shipped when a claim is submitted or may be purchased through the Parts and Accessories division.**

**DO NOT return defective parts to factory.**

**DO NOT dispose of defective parts.**

**The defective parts will be subject to standard IMC audit review procedure.**

**Field Service Managers**

Reggie Weakley: 408-846-7105, Don Mahovlic: 408-846-7201, Gary Andersen: 408-846-7305, Rich Kennedy: 408-846-7107

Routing	Service Manager	Sales Manager	Parts Manager	Lead Technician	Technician #1	Technician #2	Technician #3	Technician #4	Return this doc
---------	-----------------	---------------	---------------	-----------------	---------------	---------------	---------------	---------------	-----------------























5CDM5B5181G002953  
5CDM5B5111G002955  
5CDM5B5191G002959  
5CDM5B5151G002960  
5CDM5B5191G002962  
5CDM5B5101G002963  
5CDM5B5181G002967  
5CDM5B5111G002969  
5CDM5B5181G002970  
5CDM5B5111G002972  
5CDM5B5131G002973  
5CDM5B5191G002976  
5CDM5B5101G002977  
5CDM5B5121G002978  
5CDM5B5141G002979  
5CDM5B5141G002982  
5CDM5B5181G002984  
5CDM5B51X1G002985  
5CDM5B5111G002986  
5CDM5B5151G002988  
5CDM5B5121G002995  
5CDM5B5171G003107  
5CDM5B5171G003110  
5CDM5B5191G003111  
5CDM5B5141G003114  
5CDM5B5111G003121  
5CDM5B5161G003123  
5CDM5B5171G003124  
5CDM5B5101G003126  
5CDM5B5181G003129  
5CDM5B5141G003131